



Douglas A. Ducey  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera  
Director

## Notice of Proprietary Treatment Product Listing Pursuant to Arizona Administrative Code R18-9-A309(E) ADEQ LTF #93441

### 1. Proprietary Treatment Product Name, Model, and Description

Product Name: Advanced Enviro-Septic Wastewater Treatment System (AES WWTS)

Models: AES WWTS

Description: The AES WWTS is an assembly consisting of a corrugated, perforated polyethylene pipe, Bio-Accelerator fabric along its bottom which is surrounded by a layer of plastic fibers, and a sewn geo-textile fabric. The product is installed in a specific sand base to provide supplemental wastewater treatment prior to discharge to native soils. This listing is applicable for design flows less than 24,000 gpd.

### 2. Manufacturer Information

Name: Presby Environmental, Inc., a wholly owned subsidiary of Infiltrator Water Technologies, LLC

Address: 143 Airport Road

City/State/Zip: Whitefield, NH 03598

Phone: 603-837-3826

Fax: 603-837-9864

Website: [www.presbyeco.com](http://www.presbyeco.com)

### 3. Recognized Treatment Performance

Parameter	Statistical Measure	Value
5-Day Biochemical Oxygen Demand (BOD <sub>5</sub> ), mg/L	30-day arithmetic mean	5
Total Suspended Solids (TSS), mg/L	30-day arithmetic mean	5
Total Nitrogen as Nitrogen (TN), mg/L	five-month arithmetic mean	53*
Total Coliform, Colony Forming Unit/100mL	95 <sup>th</sup> percentile	1,000 (log <sub>10</sub> (1000) = 3)

\*Default values used due to lack of submitting 3<sup>rd</sup> party test data as required per R18-9-E309(B)

#### Main Office

1110 West Washington Street • Phoenix, AZ 85007  
(602) 771-2300

#### Southern Regional Office

400 West Congress Street • Suite 433 • Tucson, AZ 85701  
(520) 628-6733

[www.azdeq.gov](http://www.azdeq.gov)

printed on recycled paper

#### 4. Product Applicability and Limitations for Use for a Recognized General Permit Technology

**Applicability:** This listing is for only the Presby AES WWTS technology specified in A.A.C. R18-9-E309(A)(1).

**Limitations:**

- A. The AES WWTS must receive wastewater that is treated to a level equal to or better than that specified in R18-9-E302(B). Additionally, it must meet oil and grease  $\leq 75$  mg/L requirement contained in R18-9-101(46).
- B. System sand is placed a minimum of 3 inch above, 6 inch below and between the pipe rows and a minimum of 6 inch horizontally around the perimeter of the AES rows.
- C. The maximum loading rate shall not exceed 2.14 gallons per day per linear-foot of pipe with a minimum sizing of 70 linear-feet of treatment system per bedroom.
- D. The AES WWTS shall be installed in native soil in a level trench or bed configurations with a distribution box as specified in R18-9-E302(C)(1)(d).
- E. The AES WWTS shall be installed with two vents. The low vent must be at least three feet above final grade or the expected high snow level, whichever is higher. The high vent must be at least 10 feet above the inlet to the low vent. The high vent can also be part of the residential vent piping system. This approval does not restrict the use of “decorative” vents so long as the vents meet the manufacturer specifications.
- F. Pressure distribution in the AES WWTS is prohibited. However, pumps may be used when necessary only to gain elevation and feed a distribution box which then distributes effluent by gravity.
- G. The effluent from the septic tank may be delivered with a pump to a distribution box followed by gravity discharge to the AES WWTS. The discharge of a pump to a distribution box followed by gravity discharge to the AES WWTS has been determined to be equal to that of a pump and pressure distribution directly to the AES WWTS (no distribution box used) as specified in R18-9-E304. An R18-9-A312(G) submittal will be required to obtain approval of the design details to use a pump to a distribution box followed by gravity discharge to the AES WWTS. In addition, the R18-9-A312(G) will be used in conjunction with a type 4.09 general permit application to gain approval to use this method of discharge to the AES WWTS instead of using a pressurized discharge directly to the AES WWTS.
- H. The system sand quality shall conform to the following restrictions:
  - 1. No particles retained on a  $\frac{3}{4}$  inch sieve is allowed;
  - 2. Percentage restrictions (by total weight);
    - a. 35% maximum retained by a #10 sieve.
    - b. 40-90% retained by a #35 sieve.
    - c. Fines restricted to a maximum of 3% passing through a #200 sieve.
    - d. ASTM C-33 (concrete sand) natural or manufactured with not more than 3% passing through a #200 sieve (verified by washing sample per the requirements in ASTM C-117 as noted in ASTM C-33 specification) may be used as an acceptable alternate material for use as System Sand.
- I. The system sand extension is limited to a maximum width of 20 feet, i.e., distance equal to the separation.

- J.** The maximum trench width is 8 feet. The maximum trench length is 115 feet. Any excavation wider than 8 feet is considered a bed. See exception 5 e.
- K.** The maximum bed length is 115 feet. See exception 5 f.
- L.** The design of the AES WWTS shall follow the design, installation, and operation & maintenance details & conform to the requirements listed under R18-9-E309(D), (E) & (F) with the qualification that the use of geotextile material is not required. Also, see the exception in 5c.
- M.** The sand fill material for above grade installations shall meet the requirements of ASTM C-33 or approved equal.
- N.** If there is conflict between the manufacturer’s specifications and 18 A.A.C. 9, Articles 1 and 3, the provisions of the Arizona Administrative Code shall prevail.
- O.** This product listing supersedes prior product listing actions and any prior approved supporting documents.
- P.** The use of a disinfection device (per R18-9-E320) with this product is prohibited.
- Q.** The product, including the pretreatment works, is subject to A.A.C. R18-9-A312(F)(2) through (4).
- R.** This approval listing EXCLUDES appurtenances which are considered to be an alarm, control panel, control, switch, timer, wiring, other electrical devices, and installation components; which are subject to both the manufacturer specifications and any more restrictive requirement in 18 A.A.C. 9, Article 3.
- S.** ADEQ does not approve design or operation manuals for proprietary products. However, “if manufactured components are used, an applicant shall design, install, and operate the on-site wastewater treatment facility following the manufacturer’s specifications” as per R18-9-A312(F)(2).

**5. Alternative Criteria and Exceptions for Use under the Recognized General Permit Technology**

<b>Alternative:</b>	None
<b>Exceptions:</b>	<ul style="list-style-type: none"> <li>a. When the wastewater does not meet the definition of typical sewage as defined in R18-9-101(46), a Manufacturer’s Design Review Report shall be submitted for review and approval along with the Notice of Intent to Discharge. This Design Review Report shall specify component capacities, control settings, and supplemental installation &amp; operational practices.</li> <li>b. An effluent filter as specified in R18-9-A314(5)(c) is not required for use the AES WWTS.</li> <li>c. The geotextile material as specified in R18-9-E309(D)(4) is not required for the AES WWTS.</li> <li>d. The setback requirement for a driveway (or parking lot) as listed in the Table contained in R18-9-A312(C) is waived. The AES WWTS may be located below a driveway, road or parking lot if there is a minimum cover of 12 inches (excluding the thickness of the asphaltic concrete or concrete) over the upper 6 inches of the system sand cover for a total cover thickness of 18 inches. In addition, if the cover material consists of gravel on top of the system sand, then stabilization fabric will also be required to separate the gravel from the system sand.</li> <li>e. The maximum trench width requirement of 36’’ per Table contained in R18-9-E302(C)(2)(c) or the minimum bed width of 10’ per Table contained in R18-9-E302(C)(3)(b) does not need to be met.</li> </ul>

	f. The maximum trench length of 100' per Table contained in R18-9-E302(C)(2)(c) or the maximum bed length of 100' per Table contained in R18-9-E302(C)(3)(b) does not need to be met.
--	---

## 6. Documents Used as the Basis for this Proprietary Treatment Product Listing Notice

Application for Treatment Product Listing:	March 3, 2022
Manufacturer's Warranty:	Refer to LTF # 73336 TAB 3: Presby Environmental, Inc. Limited Warranty, July 13, 2018.
Manufacturer's Specifications:	The Presby Wastewater Treatment System, Arizona Design and Installation Manual for Advanced Enviro-Septic Wastewater Treatment Systems, September 2022.
Manufacturer's Design Calculations & Drawings:	The Presby Wastewater Treatment System, Arizona Design and Installation Manual for Advanced Enviro-Septic Wastewater Treatment System, September 2022.
Operation & Maintenance Manual:	Refer to LTF # 73336 TAB 8: O & M Manual, July 13, 2018.
Owner's Manual:	Refer to LTF # 73336 TAB 8: Advanced Enviro-Septic, Enviro-Septic & Simple-Septic Wastewater Treatment System Owner's Manual, July 13, 2018.
3 <sup>rd</sup> Party Test data:	Refer to LTF # 73336 TAB 10: NSF/ANSI Standard 40 Final Report – Presby Environmental, Inc. October 2015; Massachusetts Alternative Septic System Test Center Raw Data Report Presby Enviro-Septic and Advanced Enviro-Septic Pipe (September 2011).
Addendum #1:	Refer to LTF # 93441 Technical Bulletin - H-10 & H-20 Loading Documentation.

## 7. Terms and Conditions for this Proprietary Treatment Product Listing Notice

<p>A. This Notice of Proprietary Treatment Product Listing shall remain in effect until any of the following occurs:</p> <ol style="list-style-type: none"> <li>1. Applicable provisions of the Arizona Administrative Code, Title 18, Chapter 9, Article 3 are revised;</li> <li>2. Documents used for the basis of this listing are altered or modified;</li> <li>3. Manufacturer claims which are relied upon for this listing are later determined to contain an error or omission;</li> <li>4. The manufacturer requests termination of this listing;</li> <li>5. A listing error or omission is identified; or</li> <li>6. The manufacturer and ADEQ mutually agree to reissue this notification to incorporate correction or update for any reason.</li> </ol> <p>B. This Notice of Proprietary Treatment Product Listing does not apply when the:</p> <ol style="list-style-type: none"> <li>1. Listed proprietary treatment product is modified or operated in a manner that conflicts with Arizona law or the documents used for the basis of this listing action in Section 6.</li> <li>2. Listed proprietary treatment products are used in a manner that cannot achieve the performance in Section 3 above.</li> </ol> <p>C. This Notice of Proprietary Treatment Product Listing applies solely to the product specified in Section 1 above.</p>
--

D. The manufacturer is responsible for notifying ADEQ of changes to the contact information at the following address:

Attention: Product Listing Supervisor  
Engineering Review Desk  
1110 West Washington Street  
Phoenix, AZ 85007.

E. The listing by ADEQ of any proprietary product or service is not an endorsement by ADEQ or the State of Arizona. ADEQ does not endorse, represent, guarantee, warranty or defend the use of any product which is authorized for use pursuant to A.A.C. R18-9-A309(E). Product providers are a direct source unrelated to ADEQ or the State of Arizona. Use of any listed product is at the user's risk and the State assumes no liability.

<b>Signature:</b>	DocuSigned by: <i>Naveen Savarirayan</i> 468FAC42A932469 Naveen Savarirayan	<b>Date Signed:</b>	10/28/2022
<b>Title:</b>	Groundwater Protection Value Stream Manager		

ADEQ LTF # - 93441

Reviewer: Karthik Kumarasamy | PhD, PE